



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

MEMORANDUM TO: Project Engineers
Project Design Engineers

FROM: G. R. Perfetti, P. E.
State Bridge Design Engineer

DATE: October 24, 2006

SUBJECT: BRIDGE RAILS ON TEMPORARY STRUCTURE

Effective immediately, the Project Special Provisions for Construction, Maintenance and Removal of Temporary Structure have been revised to state that bridge rails shall be designed for either the Test Level 2 (TL-2) or the TL-3 crash test criteria defined in the AASHTO LRFD Bridge Design Specifications. The Project Engineer shall evaluate the site conditions to determine if a TL-3 rail is required.

Engineering judgement will be required to determine the appropriate rail type. A TL-2 rated barrier rail is the standard barrier rail on temporary structures, but if conditions warrant, a TL-3 bridge rail should be specified. During the Preliminary Field Inspection, visually evaluate and discuss the site conditions with the Area Bridge Construction Engineer or other personnel familiar with the location and the traffic conditions, to determine if a TL-3 bridge rail is warranted.

Conditions that warrant a TL-3 bridge rail include, but are not limited to:

- Structures on an NHS route.
- Posted speed greater than or equal to 45mph.
- High volume of heavy vehicles.
- Unfavorable geometric site conditions.
- High frequency of accidents based on historical data.

When a TL-3 barrier rail is required, place the following note on the plans:

The bridge rails on the temporary structure shall be designed for the AASHTO LRFD Test Level 3 (TL-3) crash test criteria. For Construction, Maintenance and Removal of Temporary Structure, see Special Provisions.

Project Engineers

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When a TL-3 barrier rail is not required, no additional plan notes are required. The Standard Notes will be updated at a later date.

GRP/DAS/snj

Attachments

PSP No. 3 ([DOC](#)) ([PDF](#))

PSP No. 4 ([DOC](#)) ([PDF](#))

cc: R. V. Keith, P. E., with attachments
R. A. Raynor, Jr., P. E., with attachments
E. C. Powell, Jr., P. E., Attn: R. A. Hancock, P. E., with attachments
J. H. Emerson, P. E., with attachments
T. S. Drda, P. E., FHWA, with attachments
R. D. Rochelle, P. E., with attachments